

Notice of Allowability

Application No.

09/888,374

Examiner

Kevin Verbrugge

Applicant(s)

KASRIEL ET AL.

Art Unit

2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to interviews of 8/31/06 and 9/5/06.
2. ☒ The allowed claim(s) is/are 1-8,12-14 and 17-27.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Shawn B. Dempster, 34,321, on 9/5/06.

The application has been amended as follows:

Please replace the claims with the following claim listing in which claims 1, 12, 21, and 25 are amended:

1. (Currently Amended) A method for delivering content on a network using differential caching, comprising steps of:
receiving a request for information from a network;
identifying a static portion and a dynamic portion of a document to be included in a response as the requested information based on previously cached information by utilizing a software element that is not part of a client;
caching the static portion in a memory that is logically local to the client that requested the information;
serving the static portion to the software element from the cached memory, the software element being logically local to the memory and not part of the client;
serving the dynamic portion to the software element from the network; and

integrating the static portion and the dynamic portion using the software element into the document included in the response as the requested information.

2. (Previously Presented) The method of claim 1 wherein the request is selected from a group consisting of: a request for a web page, a request for information from a database, a request for streaming media, and a request for email.
3. (Previously Presented) The method of claim 1 wherein the request is generated by a request-generating element relatively local to a browser associated with the client.
4. (Previously Presented) The method of claim 3 wherein the request-generating element redirects the request to locations within the network.
5. (Previously Presented) The method of claim 1 wherein the software element utilized in the identifying step is logically local to an original provider of the information.
6. (Previously Presented) The method of claim 1 wherein the caching step includes caching a tag having information concerning a version associated with the static portion.
7. (Previously Presented) The method of claim 1 further comprises a step of comparing a version of the static information to other versions of the static information.

8. (Previously Presented) The method of claim 1 wherein the request is generated by a browser associated with the client.
9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Currently Amended) A content delivery network system, comprising:
a client device operatively configured to generate a request for information from a network server;
a proxy server operatively configured to respond to the request by
obtaining the information, identifying a static portion and a dynamic portion of a document to be included in a response as the requested information based on previously cached information, identifying different versions of the information, differentially caching the static portion in a location that is logically local to the client device, and integrating the static portion and the dynamic portion into the document included in the response as the requested information;
a network server including the information; and
a communication network.
13. (Previously Presented) The system of claim 12 wherein the client device is configured to redirect the request to the proxy server.

14. (Previously Presented) The system of claim 13 wherein the redirection is performed by a software agent coupled to a browser.
15. (Canceled)
16. (Canceled)
17. (Previously Presented) The system of claim 12 further comprising a memory where the static information is independently cached.
18. (Previously Presented) The system of claim 12 wherein the request is selected from a group consisting of: a request for a web page, a request for information from a database, a request for streaming media, and a request for email.
19. (Previously Presented) The system of claim 12 wherein the proxy server is logically local to the original provider of the information.
20. (Previously Presented) The system of claim 12 wherein the proxy server is configured to generate a tag having information concerning a version associated with the static portion.
21. (Currently Amended) A memory storing information, including instructions executable by a processor, the instructions comprising:
recognizing a request from a client that is not part of the memory for
information to a first server;
redirecting the request to a proxy server other than the first server;

receiving a static portion of a document to be included in a response as the requested information from a cache in the proxy server;
receiving a dynamic portion of the document to be included in the response as the information from the first server, the dynamic portion being determined based on the static portion in the cache;
integrating the static portion and the dynamic portion into the document;
and
presenting the document in the response to the client.

22. (Previously Presented) The memory of claim 21 wherein the memory is logically local to a client side browser.
23. (Previously Presented) The memory of claim 21 wherein the memory is logically local to the proxy server.
24. (Previously Presented) The memory of claim 21 wherein the server is included in a content delivery network.
25. (Currently Amended) A cache memory storing information, including instructions executable by a processor, the instructions comprising:
receiving a request for information from a client that is not part of the memory;
redirecting the request to a first server;
receiving information from the first server, wherein the information is responsive to the request;

identifying a static portion and a dynamic portion of a document to be included in a response as the requested information by comparing the static portion to other information in the cache memory; integrating the static portion and the dynamic portion to form the document; and sending the integrated document to the client as a complete response.

26. (Previously Presented) The memory of claim 25 wherein the memory is logically local to a proxy server.

27. (Previously Presented) The memory of claim 25 also including an instruction for caching the static portion in the memory.

28. (Canceled)

29. (Canceled)

Interview Summary

The Examiner had a telephone interview with Applicant's representative on 8/31/06. The teachings of the Goulde reference were discussed. In addition, the claim language not taught by Goulde, related to integrating the static portion and dynamic portions into a document outside or away from the client that may later be included in a response served to the client as found in the independent claims 1, 12, 21, and 25 was discussed. This difference caused the Examiner to withdraw the final rejection.

The Examiner had an additional telephone interview with Applicant's representative on 9/5/06. The teachings of the present specification regarding identification of the status and dynamic portions of a document and additional claim amendments to get over the Active Cache reference mentioned below were discussed.

The following is an examiner's statement of reasons for allowance:

During discussion with Applicant's representative on 8/31/06, additional prior art was presented to the Examiner and is listed on the attached References Cited form (except for the first eight references, which were located by the Examiner in an updated search). In the article "A Survey of Web Caching Schemes for the Internet: ACM SIGCOMM Computer Communication Review", section 4.10, second paragraph, there is a citation of another article called "Active cache: caching dynamic contents on the Web, Proceedings of IFIP International Conference on Distributed Systems Platforms and Open Distributed Processing (Middleware '98)." This article was not readily available, but another article published with the same name (except for "Proceedings of ...") by the same authors the following year (1999) was readily available and presumably includes the same or more complete information. This "1999 article" will be discussed here as it relates to the claims.

The 1999 article proposes "a scheme called Active Cache, which migrates parts of server processing on each user request to the caching proxy in a flexible, on-demand fashion via 'cache applets'. A cache applet is a server-supplied code that is attached with a Universal Resource Locator (URL) or a collection of URLs. The code

is typically written in a platform-independent programming language such as Java. When caching a document, the proxy also fetches the corresponding cache applet. When a user request hits on the cached copy and the proxy would like to service the request, the proxy must invoke the cache applet with the user request and other information as arguments. The cache applet then decides what the proxy will send back to the user, giving the proxy a new document to send back to the user, or allowing the proxy to use the cached copy, or instructing the proxy to send the request to the Web server.” (page 43, section 1, second paragraph). These three options of cache applet operation are further explained later in the article.

On page 45, section 2.2.2, second paragraph, the article explains that in an advertising banner situation, “The applet, when invoked, first checks for the object that specifies the banners, their positions in the document, and their frequencies of appearance. If the object is not in cache it sends a request to the Web server to fetch the object. The applet then goes through the cached document, and for every image that is specially marked to be an advertisement banner, decides which banner should be put there according to the specifications, and changes the image URL. It then puts the new document in the New File and returns 1.”

This is a clear teaching of a proxy server integrating static (object) and dynamic (advertisement banners) portions into a document away from a client and then sending the integrated document to the client. The object contains indications where the banners are to be placed, so the proxy server merely performs advertisement banner insertion according to the indications in the object. In other words, the proxy server

merely "follows the directions" and inserts ad banners at the marked positions in a document. Then the integrated document is sent back to the user.

A similar situation is described on page 45 in section 2.2.4 where the article explains that an applet can construct client-specific pages based on an extracted client ID and an associated preference for how the information is to be integrated on a page. "After obtaining the preference, the applet composes the Web page. For each individual information item, it first tries to read the item from the cache and, if the item is not cached, fetch it from the server and cache it. It then composes the page and returns it to the user." This teaching describes how a proxy cache might customize a page for a user who wants the sports information at the top of a page and the weather at the bottom, for example. Another user might prefer weather at the top and sports at the bottom. Using the cached sports and weather information, the proxy server creates customized pages for each user according to their preferences. Nothing here is mentioned as dynamic so presumably all the information is at least relatively static, however this is a second clear teaching of integrating information at the proxy server and then sending it to the user.

After discussing these passages with Applicant's representative, he explained how the invention's step of identifying which portions are static and which portions are dynamic is different than the operation carried out by the applet of the Active Cache article when inserting ad banners. The applet uses markers in the static object itself to know where to insert the dynamic ad banners. The invention compares different objects and determines which parts the objects have in common. These are identified as the

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static portions. The different parts (those parts not in common) are identified as the dynamic portions.

Applicant's representative pointed out paragraphs 32, 40, and 59-61 of the substitute specification submitted on 12/6/04 as supporting this concept of identifying and offered to amend the claims as shown herein to overcome the Active Cache article. The amendments overcome all art of record and all rejections are therefore withdrawn. The key feature then is how the proxy server identifies static and dynamic portions of a document.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

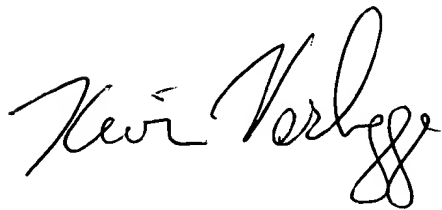
Conclusion

Any inquiry concerning this Office action should be directed to the Examiner by phone at (571) 272-4214.

Any response to this Office action should be labeled appropriately (including serial number, Art Unit 2189, and type of response) and mailed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, hand-carried or delivered to the Customer Service Window at the Randolph Building, 401 Dulany Street, Alexandria, VA 22313, or faxed to (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

A handwritten signature in black ink, appearing to read "Kevin Verbrugge". The signature is fluid and cursive, with the first name "Kevin" and last name "Verbrugge" clearly distinguishable.

Kevin Verbrugge

Primary Examiner

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